

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and/or listings of claims in the application:

1. (Currently Amended) A gas sensor comprising a body, the body comprising:
a channel having a first end and a second end and arranged to admit a gas, the channel comprising an elongated groove having reflective surfaces defining a folded optical path for light from the source;
an optical source located at the first end of the channel;
a first detector, located at the second end of the channel, to detect light from the source;
and
a second detector located to detect light from the source that has been tapped off partway along the channel so that light detected by the second detector travels a shorter optical path than has light detected by the first detector.
2. (Cancelled)
3. (Cancelled)
4. (Previously Presented) A sensor as claimed in claim 1, wherein the second detector is connected to the channel by an optical pathway arranged to redirect a portion of light from a predetermined region of the channel to the second detector.
5. (Original) A sensor as claimed in claim 1, in which a portion of the elongated groove forms a spiral optical path.
6. (Original) A sensor as claimed in claim 1, in which a portion of the groove forms a serpentine optical path.

7. (Original) A sensor as claimed in claim 1, in which a portion of the groove forms a helical optical path.
8. (Original) A sensor as claimed in claim 7, in which the body is cylindrical and the helical optical path extends around the exterior of the body.
9. (Original) A sensor as claimed in claim 8, in which the cylinder includes a hollow region and a portion of the groove comprises a helical optical path around the interior of the hollow region.
10. (Original) A sensor as claimed in claim 7, in which the body includes a hollow cylindrical region and a portion of the groove comprises a helical optical path around the interior of the hollow region.
11. (Original) A sensor as claimed in claim 1, in which the body comprises a base arranged to accommodate the source and detector(s) and at least one wall extending transversely from the plane of the base.
12. (Original) A sensor as claimed in claim 11, in which the walls are arranged substantially to bisect each other transversely.
13. (Original) A sensor as claimed in claim 11, in which a portion of the elongated groove is located on the at least one wall and a portion of the groove is located on the base.
14. (Previously Presented) A sensor as claimed in claim 1, further comprising a cover for the channel including a gas admittance member.

15. (Original) A sensor as claimed in claim 14, in which the cover has an interior surface facing the channel, which surface is arranged to reflect radiation.
16. (Original) A sensor as claimed in claim 14, in which the gas admittance means includes sintered material.
17. (Original) A sensor as claimed in claim 14, in which the gas admittance means includes a particulate filter.
18. (Original) A sensor as claimed in claim 1 wherein the optical source is an infrared source.
19. (Cancelled)